

CLAIMS

What is claimed is:

1. A method, comprising:
defining a hypertext transfer protocol (HTTP) connection by a client-side connection and a server-side connection;
establishing the HTTP connection between a client terminal and a server in response to a request from the client terminal to access the server; and
maintaining persistent at least the server-side connection using a plurality of different techniques.
2. The method of claim 1, further comprising closing the client-side connection while the server-side connection is maintained persistent.
3. The method of claim 2 wherein maintaining persistent at least the server-side connection using the plurality of different techniques includes maintaining the server-side connection persistent in response to a RESET packet sent from the client terminal.
4. The method of claim 2 wherein maintaining persistent at least the server-side connection using the plurality of different techniques includes maintaining the server-side connection persistent in response to a FIN packet sent from the client terminal.
5. The method of claim 1, further comprising closing both the client-side and server-side connections in response to a FIN packet sent from the server.

6. The method of claim 1 wherein maintaining persistent at least the server-side connection using the plurality of different techniques includes:

identifying a Connection: Close header in the request from the client; and
replacing the Connection: Close header in the request with a Connection: Keep-Alive header.

7. The method of claim 6, further comprising at least one of increasing a total length of a packet having the Connection: Close header, fragmenting the packet having the Connection: Close header, and recalculating a checksum of the packet.

8. The method of claim 1 wherein maintaining persistent at least the server-side connection using the plurality of different techniques includes inserting a Connection: Keep-Alive header in the request if the request does not contain any header information indicative of whether to close the HTTP connection.

9. The method of claim 1 wherein maintaining persistent at least the server-side connection using the plurality of different techniques includes modifying a header in the request, the header being indicative of whether to close the HTTP connection, to a form that is unrecognizable by the server to cause the server to ignore the header.

10. The method of claim 9 wherein modifying the header in the request to the form that is unrecognizable to the server includes at least one of modifying a name of the header and modifying a value of the header.

11. The method of claim 1 wherein maintaining persistent at least the server-side connection using the plurality of different techniques includes changing a HTTP version value indicated in the request to another HTTP version value that is recognizable by the server as being associated with a persistent connection.

12. The method of claim 11, further comprising adjusting a checksum based on the difference between the HTTP version values.

13. The method of claim 1 wherein the request includes a header having a proxy format.

14. A method, comprising:
establishing a client-side connection and a server-side connection;
reading content of a packet sent via the client-side connection to determine one of several techniques to use to extend a persistency of the server-side connection; and
extending the persistency of the server-side connection while closing the client-side connection, in response to the packet sent via the client-side connection and based upon the read content of the packet.

15. The method of claim 14 wherein establishing the client-side and server-side connections include establishing these connections as part of a hypertext transfer protocol (HTTP) connection.

16. The method of claim 14 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes maintaining persistent the server-side connection if the read content indicates that the packet is a RESET packet received via the client-side connection.

17. The method of claim 14 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes maintaining persistent the server-side connection if the

read content indicates that the packet is a FIN packet received via the client-side connection.

18. The method of claim 14 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes:

identifying header information of the packet received via the client-side connection that is indicative of a closing of the HTTP connection; and

replacing the identified header information with new header information that is indicative of maintaining the server-side connection persistent.

19. The method of claim 14 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes:

determining that header information of the packet does not include any information indicative of a closing of the HTTP connection; and

applying header information in the packet that is indicative of maintaining the server-side connection persistent.

20. The method of claim 14 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes modifying header information in the packet, the header information being indicative of a closing of the server-side connection, to a format that is unrecognizable by a server that is to receive the packet to cause the server to maintain the server-side connection persistent.

21. The method of claim 14 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes changing a protocol version value indicated in the packet

to a different protocol version value that corresponds to maintaining a persistent connection.

22. An article of manufacture, comprising:
a machine-readable medium having instructions stored thereon to:
define a hypertext transfer protocol (HTTP) connection by a client-side connection and a server-side connection;
establish the HTTP connection between a client terminal and a server in response to a request from the client terminal to access the server; and
maintain persistent at least the server-side connection using a plurality of different techniques.

23. The article of manufacture of claim 22 wherein the instructions to maintain at least the server-side connection persistent include instructions to maintain the server-side connection persistent in response to at least one of a RESET packet and a FIN packet sent from the client terminal.

24. The article of manufacture of claim 22 wherein the instructions to maintain at least the server-side connection persistent include instructions to perform at least one of:
maintain the server-side connection persistent by changing header information in the request to new header information indicative of a persistent connection; and
maintain the server-side connection persistent by inserting, in the request, new header information that is indicative of the persistent connection.

25. The article of manufacture of claim 22 wherein the instructions to maintain at least the server-side connection persistent include instructions to maintain the server-side connection persistent via modification of header information in the

request to a format unrecognizable by the server to cause the server to ignore the header information and instead maintain the server-side connection persistent.

26. The article of manufacture of claim 22 wherein the instructions to maintain at least the server-side connection persistent include instructions to maintain the server-side connection persistent via modification of a protocol version number indicated in the request to a different protocol version number that corresponds to a persistent connection.

27. An apparatus, comprising:
a means for establishing a client-side connection and a server-side connection;
a means for reading content of a packet sent via the client-side connection to determine one of several techniques to use to extend a persistency of the server-side connection; and
a means for extending the persistency of the server-side connection while closing the client-side connection, in response to the packet sent via the client-side connection and based upon the read content of the packet.

28. The apparatus of claim 27 wherein the means for extending the persistency of the server-side connection includes a means for modifying header information in the packet to an unrecognizable format.

29. The apparatus of claim 27 wherein the means for extending the persistency of the server-side connection includes a means for modifying header information in the packet to indicate a protocol version that corresponds to a persistent connection.

30. The apparatus of claim 27 wherein the means for extending the persistency of the server-side connection includes at least one of a means for maintaining the server-side connection persistent while closing the client-side connection based on RESET content in the packet, a means for maintaining the server-side connection persistent while closing the client-side connection based on FIN content in the packet, a means for replacing a Connection: Close header of the packet with a Connection: Keep-Alive header, and a means for inserting a Connection: Keep-Alive header in the packet.

31. An apparatus, comprising:

first and second communication terminals through which is defined a portion of a hypertext transfer protocol (HTTP) connection, the first terminal being associated with a client-side connection and the second terminal being associated with a server-side connection;

a processor coupled to the first and second communication terminals to establish the HTTP connection between a client terminal and a server in response to a request from the client terminal to access the server; and

software executable by the processor to maintain persistent at least the server-side connection using a plurality of different techniques specified by the software.

32. The apparatus of claim 31 wherein the software includes code to modify a format of header information in the request to a format that is unrecognizable by the server, to cause the server to ignore the header information and instead maintain the server-side connection persistent.

33. The apparatus of claim 31 wherein the software includes code to modify a HTTP protocol version value indicated in the request to a HTTP protocol version value that is associated with a persistent connection.

34. The apparatus of claim 31 wherein the software includes code to maintain the server-side connection persistent while closing the client-side connection in response to at least one of a RESET and a FIN sent from the client terminal.

35. The apparatus of claim 31 wherein the software includes code to maintain the server-side connection persistent via at least one of modification of a Connection: Close header in the request to Connection: Keep-Alive and insertion of the Connection: Keep-Alive in the request.

36. The apparatus of claim 31 wherein the software includes code to close the server-side connection in response to at least one of a RESET and FIN sent from the server.

37. A method, comprising:
establishing a client-side connection and a server-side connection;
reading content of a packet sent via the client-side connection to determine a technique to apply to extend a persistency of the server-side connection;
and
applying the determined technique to extend the persistency of the server-side connection while closing the client-side connection, in response to the packet sent via the client-side connection and based upon the read content of the packet, including applying the determined technique for any request method specified in the packet.

38. The method of claim 37 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes maintaining persistent the server-side connection if the read content indicates that the packet is at least one of a FIN and RESET packet received via the client-side connection.

39. The method of claim 37 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes:

identifying header information of the packet received via the client-side connection that is indicative of a closing of the HTTP connection; and

replacing the identified header information with new header information that is indicative of maintaining the server-side connection persistent.

40. The method of claim 37 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes:

determining that header information of the packet does not include any information indicative of a closing of the HTTP connection; and

applying header information in the packet that is indicative of maintaining the server-side connection persistent.

41. The method of claim 37 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes modifying header information in the packet, the header information being indicative of a closing of the server-side connection, to a format that is unrecognizable by a server that is to receive the packet to cause the server to maintain the server-side connection persistent.

42. The method of claim 37 wherein extending the persistency of the server-side connection while closing the client-side connection based upon the read content of the packet includes changing a protocol version value indicated in the packet to a different protocol version value that corresponds to maintaining a persistent connection.